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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,960	12/09/2003	Min-Su Kim	5649-1157	3659

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EXAMINER

FRANKLIN, RICHARD B

ART UNIT	PAPER NUMBER
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2181

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/730,960

Applicant(s)

KIM ET AL.

Examiner

Richard Franklin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10,20-22,24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10,20-22,24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Fritz Fleming
FRITZ FLEMING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100
1/4/2007

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 09/07/04.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1 – 10, 20 – 22, and 24 – 25 are pending.

Election/Restrictions

2. Applicant's election without traverse of Invention I including claims 1 – 10, 20 – 22, and 24 – 25 in the reply filed on 27 October 2006 is acknowledged.

Drawings

3. The drawings are objected to because Figure 4 includes non-English characters. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

4. The information disclosure statement (IDS) submitted on 07 September 2004 has been considered by the examiner.

Claim Objections

5. Claim 25 is objected to because of the following informalities:
- Claim 25 recites "***recycling*** power provided to the controller circuit" (emphasis added) in line 2 of the claim. However, it appears that the Applicant intended to claim "cycling power" which means turning off the power and then turning the power back on.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1 – 10, 21 – 22, and 24 – 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites, "a programmable memory in the electronic device via a controller circuit that controls programming of the programmable memory in the electronic device ***that is separate*** from a general operation processor circuit" (emphasis added) in lines 2 – 5 of the claim. It is not clear what is separate from the general operation processor circuit.

The Examiner has interpreted the limitation to recite that the controller circuit is separate from the general operation processor circuit.

Claims 2 – 10 and 24 – 25 recite the limitation "a method" in the first line of each claim. There is insufficient antecedent basis for this limitation in the claim. It is not clear if the claims are referring to the method of claim 1 or a new method.

The Examiner has interpreted the limitation to refer to the method of claim 1.

Claims 21 – 22 recite the limitation "a circuit" in the first line of each claim. There is insufficient antecedent basis for this limitation in the claim. It is not clear if the claims are referring to the circuit of claim 20 or a new circuit.

The Examiner has interpreted the limitation to refer to the circuit of claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 – 3, 6 – 10, and 20 – 21 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,968,141 (hereinafter Tsai).

As per claim 1, Tsai teaches a method for programming an electronic device (Figure 3 Item 30) comprising transferring program data from outside the electronic device to a programmable memory (Figure 3 Item 34) in the electronic device via a controller circuit (Figure 3 Item 32) that controls programming of the programmable memory in the electronic device that is separate from a general operation processor circuit (Figure 3 Item 33) used to provide general operations of the electronic device subsequent to transferring the program data into the programmable memory (Col 6 Lines 34 – 40 and Lines 45 – 52).

As per claim 2, Tsai also teaches wherein the step of transferring further comprises transferring the program data without using RAM (Figure 3 Item 35) devices, which are separate from the controller circuit.

As per claim 3, Tsai also teaches wherein the RAM operates under control of the general operation processor circuit and not under the control of the controller circuit (Col 4 Lines 63 – 67).

As per claim 6, Tsai also teaches wherein the general operation processor circuit accesses the program data in the programmable memory to provide the general operations of the electronic device subsequent to transferring the program data into the programmable memory (Col 3 Lines 61 – 67).

As per claim 7, Tsai also teaches wherein the general operation processor circuit accesses separate RAM (Figure 3 Item 35) and ROM (Figure 3 Item 34) to provide general operations of the electronic device (Col 4 Lines 63 – 67, Col 6 Lines 34 – 40).

As per claim 8, Tsai also teaches wherein the general operation processor is prevented from accessing the programmable memory during the transfer of program into the programmable memory (Col 3 Lines 61 – 67 [The multiplexer disconnects the microprocessor from the memory during programming, therefore prevents access to the memory by the processor]).

As per claim 9, Tsai also teaches transmitting an indication to outside the electronic device that the transfer program data to the program memory is complete (Col 6 Lines 9 – 12).

As per claim 10, Tsai also teaches transmitting a reset signal to the controller circuit to enable the general operation circuit to access the program data transferred into the programmable memory (Figure 4 "Reset", Col 5 Lines 22 – 27).

As per claim 20, Tsai teaches a controller circuit (Figure 3 Item 32) configured to transfer program data from outside the device (Figure 3 Item 30) to a programmable memory (Figure 3 Item 34) in the device, the controller circuit being separate from a general operation processor circuit (Figure 3 Item 33) used to provide general operations of the device subsequent to transferring the program into the programmable memory (Col 6 Lines 34 – 40 and Lines 45 – 52).

As per claim 21, Tsai also teaches wherein the controller circuit comprises a decoder circuit (Figure 4 Item 321) coupled to an interface (Figure 3 Item 10A) via which the program data is transferred to the monitor, the decoder circuit configured to provide a first signal responsive to determining that data received via the interface includes an address within a controller circuit address range (Col 7 Lines 31 – 40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4 – 5 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,968,141 (hereinafter Tsai) in view of US Patent No. 6,295,053 (hereinafter '053 patent).

As per claim 4, Tsai teaches the method as described per claim 1 (see rejection of claim 1 above).

Tsai does not teach wherein the program data is transferred via a Video Graphics Adapter (VGA) interface.

However, the '053 patent teaches updating program data by sending the program data over a VGA interface ('053; Figure 3 Item 18, Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Tsai to include the VGA interface because doing so allows for programming of the device without the need for a special programming port or interface ('053; Col 6 Lines 61 – 67).

As per claims 5 and 24, Tsai teaches the method as described per claim 1 (see rejection of claim 1 above).

Tsai does not teach wherein the program data is transferred via an Inter-Integrated Circuit (IIC or I²C) interface or a serial interface.

However, the '053 patent teaches updating program data by sending the program data over an IIC interface ('053; Figures 8 and 9 Item 510). IIC is, by definition, a serial interface.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Tsai to include the IIC interface because doing so allows for the device to determine activation commands ('053; Col 5 Lines 60 – 63).

9. Claims 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,968,141 (hereinafter Tsai) in view of US Patent No. 6,507,881 (hereinafter Chen).

As per claim 22, Tsai teaches the method as described per claim 21 (see rejection of claim 21 above).

Tsai does not teach a buffer circuit to provide data to and from the programmable memory.

However, Chen teaches a buffer circuit (Chen; Figure 2 Item 206) to provide data to and from the programmable memory (Chen; Col 3 Lines 58 – 61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Tsai to include the buffer

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because doing so would allow for release of the data bus for other uses during programming (Chen; Col 7 Lines 32 – 37).

As per claim 25, Tsai teaches the method as described per claim 9 (see rejection of claim 9 above).

Tsai does not teach cycling power provided to the controller circuit to reset the controller circuit.

However, Chen teaches re-booting the system when the programming has completed (Chen; Col 4 Lines 14 – 16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Tsai to include the power cycling because doing so would allow for the system to return to a normal operating mode (Chen; Col 4 Lines 14 – 16).

Conclusion

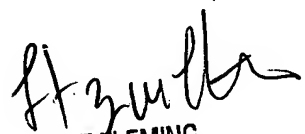
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Franklin whose telephone number is (571) 272-0669. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz Fleming can be reached on (571) 272-4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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1/4/2007